

ABSTRACT OF THE DISCLOSURE

A method for providing three dimensional optical memory storage for computers. The method comprises subjecting a nanocomposite to irradiation. The nanocomposite comprises a matrix of particles of a liquid core resin within an inner shell resin and an outer shell resin. The inner shell resin retains the liquid core resin while the outer shell resin forms a continuous phase of the matrix. The particles of core resin contain at least one photosensitive compound and are in an array in the matrix. The continuous phase is substantially free of photosensitive compound. The irradiation may be a single beam of irradiation selectively focused on individual particles in the array to effect photobleaching of individual particles or a two-photon irradiation of a wavelength to effect photobleaching.